

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

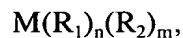
Listing of Claims:

Claim 1. (Original) A ferromagnetic powder composition comprising soft magnetic iron-based core particles wherein the surface of the core particles are surrounded by an insulating inorganic coating, and a lubricating amount of a compound selected from the group consisting of silanes, titanates, aluminates, zirconates, or mixtures thereof.

Claim 2. (Original) A composition according to claim 1 wherein the compound has at least one hydrolysable group and at least one lubricating organic moiety.

Claim 3. (Currently Amended) A composition according to claim 1 ~~or 2~~ wherein the compound is present as a lubricating layer on the insulated particles.

Claim 4. (Currently Amended) A composition according to ~~any one of the claims 1-3~~ claim 1, wherein the compound has the following general formula:



wherein M is a central atom selected from Si, Ti, Al, or Zr,

R₁ is a hydrolysable group,

R₂ is a group consisting of a lubricating organic moiety, wherein the sum of m+n is the coordination number of the central atom;

n is an integer ≥ 1 and

m is an integer ≥ 1 .

Claim 5. (Currently Amended) A composition according to claim 4, wherein R_1 is an alkoxy group having less than 12, ~~preferably less than 6 and most preferably less than 3~~ carbon atoms.

Claim 6. (Original) A composition according to claim 4, wherein R_1 is a chelate group.

Claim 7. (Original) A composition according to claim 6, wherein the chelate group is a residue of hydroxyacetic acid ($-\text{O}(\text{O}=\text{C})-\text{CH}_2\text{O}-$) or a residue of ethylene glycol ($-\text{OCH}_2\text{CH}_2\text{O}-$).

Claim 8. (Currently Amended) A composition according to ~~any one of claims 4-7~~ claim 4, wherein R_2 is an organic group including between 6-30, ~~preferably 10-24 carbon atoms~~, and optionally including one or more hetero atoms selected from the group consisting of N, O, S and P.

Claim 9. (Original) A composition according to claim 8, wherein the R_2 group is linear, branched, cyclic, or aromatic.

Claim 10. (Currently Amended) A composition according to ~~any of claims 8-9~~
claim 8, wherein the R₂ group is a chain selected from the group consisting of alkyl, ether,
ester, phospho-alkyl, phospho-lipid, or phospho-amine.

Claim 11. (Original) A composition according to claim 10, wherein the R₂ is
selected from the group consisting of phosphato, pyrophosphato or phosphito.

Claim 12. (Currently Amended) A composition according to ~~any one of the claims~~
~~1-10~~ claim 1, wherein the compound is selected from the group consisting of alkyl-alkoxy
silanes and polyether-alkoxy silanes.

Claim 13. (Currently Amended) A composition according to ~~any one of the~~
~~preceding claims~~ claim 1, wherein the compound is selected from the group consisting of
octyl-trimethoxy silane, hexadecyl-trimethoxy silane, polyethyleneether-trimethoxy silane,
isopropyl-triisostearyl titanate, isopropyl-tri(dioctyl)phosphato titanate,
neopentyl(diallyl)oxy-trineodecanoyl zirconate, neopentyl(diallyl)oxy-tri(dioctyl)phosphato
zirconate, and diisobutylacetoacetyl aluminate.

Claim 14. (Currently Amended) A composition according to ~~any one of claims 1-~~
~~13~~ claim 1, wherein the insulating inorganic coating of the iron-based particles is
phosphorous based.

Claim 15. (Currently Amended) A composition according to ~~any of claims 1-14~~ claim 1, wherein the iron-based core particles consist of essentially pure iron.

Claim 16. (Currently Amended) A composition according to ~~any of the claims 1-15~~ claim 1, wherein less ~~[[the]]~~ than 5% of the iron-based core particles have a size below 45 μm .

Claim 17. (Currently Amended) A composition according to ~~any one of the claims 1-16~~ claim 1, wherein at least 40% ~~and preferably at least 60%~~ of the iron-based core particles consist of particles having a particle size above about 106 μm .

Claim 18. (Currently Amended) A powder composition according to ~~any one of the claims 1-17~~ claim 1, wherein at least 20%, ~~preferably at least 40%, and most preferably at least 60%~~ of the iron-based core particles consist of particles having a particle size above about 212 μm .

Claim 19. (Currently Amended) A composition comprising a compound according to ~~any one of the claims 1-18~~ claim 1, wherein the amount of the compound is present in an amount of 0.05-0.5%, ~~preferably 0.07-0.45%, and most preferably 0.08-0.4%~~ by weight.

Claim 20. (Currently Amended) A composition according to ~~any of claims 1-19~~
claim 1, which is ~~optionally~~ mixed with additives, such as particular lubricants, binders or
flow-enhancing agents.

Claim 21. (Currently Amended) Process for the preparation of soft magnetic
composite materials having a density of at least 7.45 g/cm³ comprising the steps of

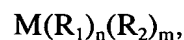
- providing an iron or iron-based powder composition according to ~~any one of~~
~~the claims 1-20~~ claim 1;
- uniaxially compacting the obtained soft magnetic powder composition in a
die at a compaction pressure of at least about 800 MPa; and
- ejecting the green body from the compaction tool; and
- optionally heat-treating the compacted body.

Claim 22. (Currently Amended) Process according to claim 21, wherein the
compaction is performed at a pressure of at least about 900 MPa, ~~more preferably at least~~
~~1000 MPa, and most preferably above 1100 MPa.~~

Claim 23. (Currently Amended) Process according to claim 21 ~~or 22~~, wherein the
particle size of the iron core powder is as defined in ~~any one of the claims 16-18~~ claim 16.

Claim 24. (New) A composition according to claim 2 wherein the compound is
present as a lubricating layer on the insulated particles.

Claim 25. (New) A composition according to claim 2, wherein the compound has the following general formula:



wherein M is a central atom selected from Si, Ti, Al, or Zr,

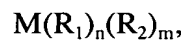
R₁ is a hydrolysable group,

R₂ is a group consisting of a lubricating organic moiety, wherein the sum of m+n is the coordination number of the central atom;

n is an integer ≥ 1 and

m is an integer ≥ 1 .

Claim 26. (New) A composition according to claim 3, wherein the compound has the following general formula:



wherein M is a central atom selected from Si, Ti, Al, or Zr,

R₁ is a hydrolysable group,

R₂ is a group consisting of a lubricating organic moiety, wherein the sum of m+n is the coordination number of the central atom;

n is an integer ≥ 1 and

m is an integer ≥ 1 .

Claim 27. (New) A composition according to claim 4, wherein R_2 is an organic group including between 10-25 carbon atoms and optionally including one or more hetero atoms selected from the group consisting of N, O, S and P.

Claim 28. (New) A composition according to claim 9, wherein the R_2 group is a chain selected from the group consisting of alkyl, ether, ester, phospho-alkyl, phospho-lipid, or phospho-amine.

Claim 29. (New) A composition according to claim 1 wherein at least 60% of the iron-based ore particles consist of particles having a particle size of about 106 μm .

Claim 30. (New) A composition according to claim 1 wherein at least 40% of the iron-based particles consist of particles having a particle size above about 212 μm .

Claim 31. (New) A composition according to claim 1 wherein at least 60% of the iron-based particles consist of particles having a particle size above about 212 μm .

Claim 32. (New) A composition comprising a compound according to claim 1, wherein the amount of the compound is present in an amount of 0.07-0.45% by weight.

Claim 33. (New) A composition comprising a compound according to claim 1, wherein the amount of the compound is present in an amount of 0.08-0.4% by weight.

Claim 34. (New) Process according to claim 21, wherein the compaction is performed at a pressure of at least about 1000 MPa.

Claim 35. (New) Process according to claim 21, wherein the compaction is performed at a pressure of at least about 1100 MPa.

Claim 36. (New) Process according to claim 22, wherein the particle size of the iron core powder is as defined in claim 16.